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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,138	01/11/2002	Takeshi Kimura	2001_1864A	5807
513	7590	03/05/2004	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P.			FEELY, MICHAEL J	
2033 K STREET N. W.			ART UNIT	
SUITE 800			PAPER NUMBER	
WASHINGTON, DC 20006-1021			1712	

DATE MAILED: 03/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/042,138

Applicant(s)

KIMURA ET AL.

Examiner

Michael J Feely

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 0702.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

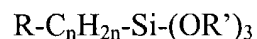
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikemoto et al. (JP 10-214741). A machine translation of this reference, provided by the JPO website, has been relied upon for the following rejection. All citations should be directed towards the translation document.

Regarding claims 1 and 2, Ikemoto et al. disclose: *(I)* a ceramic device (Abstract) comprising: a ceramic element (Abstract); an external electrode on said ceramic element (Abstract; paragraph 0034; Figure 1); and a protective layer on said ceramic element and external electrode (Abstract; paragraphs 0013-0028), said protective layer being formed through impregnating a compound into said ceramic element and external electrode (paragraphs 0042-0047; Figures 2d and 3a) and through dehydration condensation (Abstract; paragraphs 0017 and 0022), said compound being expressed by a formula of:

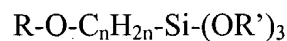


where R is an epoxy group, alkyl group, aryl group, perfluoroaryl group, or mixture thereof, n is a natural number, and R' is an alkyl group having 1 to 4 carbon atoms, hydrogen, or halogen atom (Abstract; paragraphs 0013-0028), wherein at least one R' is hydrogen (Abstract;

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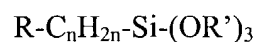
paragraphs 0017 and 0022); and (2) wherein ceramic element is a sintered dielectric material (Abstract; paragraphs 0038-0041).

Regarding claims 3 and 4, Ikemoto et al. disclose: (3) a ceramic device (Abstract) comprising: a ceramic element (Abstract); an external electrode on said ceramic element (Abstract; paragraph 0034; Figure 1); and a protective layer on said ceramic element and external electrode (Abstract; paragraphs 0013-0028), said protective layer being formed through impregnating a compound into said ceramic element and external electrode (paragraphs 0042-0047; Figures 2d and 3a) and through dehydration condensation (Abstract; paragraphs 0017 and 0022), said compound being expressed by a formula of:



where R is an epoxy group, alkyl group, aryl group, perfluoroaryl group, or mixture thereof, n is a natural number, and R' is an alkyl group having 1 to 4 carbon atoms, hydrogen, or halogen atom (Abstract; paragraphs 0013-0028), wherein at least one R' is hydrogen (Abstract; paragraphs 0017 and 0022); and (4) wherein ceramic element is a sintered dielectric material (Abstract; paragraphs 0038-0041).

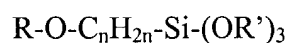
Regarding claims 5 and 6, Ikemoto et al. disclose: (5) a method of manufacturing a ceramic device (Abstract) comprising the steps of: providing ceramic electronic device including a ceramic element (Abstract) and an external electrode on said ceramic element (paragraphs 0038-0042; Figures 2a-d); plating the external electrode (paragraph 0049); immersing the ceramic electronic device into a solution containing a compound expressed by the formula:



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where R is an epoxy group, alkyl group, aryl group, perfluoroaryl group, or mixture thereof, n is a natural number, and R' is an alkyl group having 1 to 4 carbon atoms, hydrogen, or halogen atom (paragraphs 0042-0047; Figure 3a), wherein at least one R' is hydrogen (Abstract; paragraphs 0017 and 0022); and taking out the immersed ceramic device from the solution and subjecting the ceramic device to heat treatment (paragraph 0048; Figure 3b); and **(6)** wherein said step of providing the ceramic electronic device includes the sub-steps of: forming the ceramic element through stacking an internal electrode and a ceramic layer (paragraph 0039-0041; Figure 2a-c); and forming external electrodes on the ceramic sheet, being electrically connected to the internal electrode (paragraph 0042; Figure 2d).

Regarding claims 7 and 8, Ikemoto et al. disclose: **(7)** a method of manufacturing a ceramic device (Abstract) comprising the steps of: providing ceramic electronic device including a ceramic element (Abstract) and an external electrode on said ceramic element (paragraphs 0038-0042; Figures 2a-d); plating the external electrode (paragraph 0049); immersing the ceramic electronic device into a solution containing a compound expressed by the formula:



where R is an epoxy group, alkyl group, aryl group, perfluoroaryl group, or mixture thereof, n is a natural number, and R' is an alkyl group having 1 to 4 carbon atoms, hydrogen, or halogen atom (paragraphs 0042-0047; Figure 3a), wherein at least one R' is hydrogen (Abstract; paragraphs 0017 and 0022); and taking out the immersed ceramic device from the solution and subjecting the ceramic device to heat treatment (paragraph 0048; Figure 3b); and **(8)** wherein said step of providing the ceramic electronic device includes the sub-steps of: forming the ceramic element through stacking an internal electrode and a ceramic layer (paragraph 0039-

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0041; Figure 2a-c); and forming external electrodes on the ceramic sheet, being electrically connected to the internal electrode (paragraph 0042; Figure 2d).

It should be noted that regarding claims 1-8, at least one hydroxyl group would have inherently been present during the disclosed step of dehydration condensation. This is simply another way of expressing the sequence of hydrolysis and condensation of the hydrolyzable silane.

### ***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "Michael J. Feely", with a long, sweeping horizontal stroke extending to the right.

Michael J. Feely  
Patent Examiner  
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February 23, 2004